AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-23 (Cancelled).

24. (Currently Amended) A method for detecting the presence of a chemical moiety comprising the steps of:

(a) forming a mixture comprising

(i) an agent which forms a reductant upon exposure of the mixture to an electrochemical potential sufficient to oxidize said agent, and

(ii) a chemical moiety which is not oxidized to a ~~high~~ higher oxidation state at said electrochemical potential and is capable of emitting electrochemiluminescence;

(b) applying electrochemical potential to the mixture, said electrochemical potential oxidizing said agent but not said chemical moiety;

(c) inducing the chemical moiety to emit electrochemiluminescence; and

(d) detecting said electrochemiluminescence.

25. (Currently Amended) A method for generating electrochemiluminescence comprising the steps of:

(a) forming a mixture comprising

(i) an agent which forms a reductant upon exposure of the mixture to an electrochemical potential sufficient to oxidize said agent, and

(ii) a chemical moiety which is not oxidized to a ~~high~~ higher oxidation state at said electrochemical potential and is capable of emitting electrochemiluminescence; and

(b) applying electrochemical potential to the mixture, said electrochemical potential oxidizing said agent but not said chemical moiety; and

(c) inducing the chemical moiety to emit electrochemiluminescence.

26. (Currently Amended) A method for detecting an analyte of interest comprising the steps of:

(a) forming a mixture comprising

(i) an analyte of interest,

(ii) an agent which forms a reductant upon exposure of the mixture to an electrochemical potential sufficient to oxidize said agent, and

(iii) a chemical moiety which is

(1) not oxidized to a ~~high~~ higher oxidation state at said electrochemical potential,

(2) capable of emitting electrochemiluminescence, and

(3) capable of binding to said analyte;

(b) applying electrochemical potential to the mixture, said electrochemical potential oxidizing said agent but not said chemical moiety;

(c) inducing the chemical moiety to emit electrochemiluminescence; and

(d) detecting said electrochemiluminescence.

27. (Previously Presented) The method of claim 26, wherein the chemical moiety comprises a luminescent rare earth metal chelate.

28. (Previously Presented) The method of claim 26, wherein the chemical moiety comprises a biological substance.

29. (Previously Presented) The method of claim 28, wherein the biological substance is an antibody.

30. (Previously Presented) The method of claim 28, wherein the chemical moiety further comprises a luminescent metal chelate.

31. (Previously Presented) The method of claim 26, wherein the analyte of interest is a substance selected from the group consisting of whole cells, viruses, subcellular particles, nucleic acids, polysaccharides, proteins, glycoproteins, lipoproteins, lipopolysaccharides, lipids, fatty acids, peptides, cellular metabolites, hormones, pharmacological agents, tranquilizers, barbiturates, alkaloids, steroids, vitamins, amino acids, sugars and non-biological polymers.

32. (Previously Presented) The method of claim 26, wherein the analyte of interest is a substance selected from the group consisting of insulin, digoxin, digitoxin, T4 thyroid hormone, fungus, nematode, serum-derived antibody, monoclonal antibody, DNA fragment and RNA fragment.

33. (Currently Amended) A method for detecting an analyte of interest comprising the steps of:

(a) forming a mixture comprising:

(i) an analyte of interest,

(ii) an agent which forms a reductant upon exposure of the mixture to an electrochemical potential sufficient to oxidize said agent,

(iii) a binding reagent which binds the analyte of interest and

(iii) a chemical moiety which is:

(1) not oxidized to a ~~high~~ higher oxidation state at said electrochemical potential,

(2) capable of emitting electrochemiluminescence, and

(3) capable of competing with said analyte for binding to said binding reagent;

(b) applying electrochemical potential to the mixture, said electrochemical potential oxidizing said agent but not said chemical moiety;

(c) inducing the chemical moiety to emit electrochemiluminescence; and

(d) detecting said electrochemiluminescence.

34. (Previously Presented) The method of claim 33, wherein the chemical moiety comprises a luminescent rare earth metal chelate.

35. (Previously Presented) The method of claim 33, wherein the chemical moiety comprises a biological substance.

36. (Previously Presented) The method of claim 35, wherein the biological substance is an analog of the analyte.

37. (Previously Presented) The method of claim 35, wherein the chemical moiety further comprises a luminescent metal chelate.

38. (Previously Presented) The method of claim 33, wherein the analyte of interest is a substance selected from the group consisting of whole cells, viruses, subcellular particles, nucleic acids, polysaccharides, proteins, glycoproteins, lipoproteins, lipopolysaccharides, lipids, fatty acids, peptides, cellular metabolites, hormones, pharmacological agents, tranquilizers, barbiturates, alkaloids, steroids, vitamins, amino acids, sugars and non-biological polymers.

39. (Previously Presented) The method of claim 33, wherein the analyte of interest is a substance selected from the group consisting of insulin, digoxin, digitoxin, T4 thyroid hormone, fungus, nematode, serum-derived antibody, monoclonal antibody, DNA fragment and RNA fragment.

40. (New) The method of claim 24, wherein said chemical moiety has the formula: $[MPL^1L^2\text{-(-link-)-}]_tB$ wherein M is a lanthanide element; P is a polydentate ligand of M; L^1 and L^2 are ligands of M, each of which may be a substance covalently bound to one or more of P, L^1, or L^2 through one or more covalent amide or amine bond linkages, said linkages designated as (-link-) and linking B with at least one of P, L^1, or L^2; t is an integer equal to or greater than 1; and B is a biological substance.

41. (New) The method of claim 25, wherein said chemical moiety has the formula: $[MPL^1L^2\text{-(-link-)-}]_tB$ wherein M is a lanthanide element; P is a polydentate ligand of M; L^1 and L^2 are ligands of M, each of which may be a substance covalently bound to one or more of P, L^1, or L^2 through one or more covalent amide or amine bond linkages, said linkages designated as (-link-) and linking B with at least one of P, L^1, or L^2; t is an integer equal to or greater than 1; and B is a biological substance.

42. (New) The method of claim 26, wherein said chemical moiety has the formula: $[MPL^1L^2\text{-(-link-)-}]_tB$ wherein M is a lanthanide element; P is a polydentate ligand of M; L^1 and L^2 are ligands of M, each of which may be a substance covalently bound to one or more of P, L^1, or L^2 through one or more covalent amide or amine bond linkages, said linkages designated as (-link-) and linking B with at least one of P, L^1, or L^2; t is an integer equal to or greater than 1; and B is a biological substance.

43. (New) The method of claim 33, wherein said chemical moiety has the formula: $[MPL^1L^2\text{-}(\text{-link-})\text{-}]_tB$ wherein M is a lanthanide element; P is a polydentate ligand of M; L^1 and L^2 are ligands of M, each of which may be a substance covalently bound to one or more of P, L^1, or L^2 through one or more covalent amide or amine bond linkages, said linkages designated as (-link-) and linking B with at least one of P, L^1, or L^2; t is an integer equal to or greater than 1; and B is a biological substance.